Some printers require additional work after inserting a new cartridge or drum. The following contains basic instructions on resetting the counters required for some printers.

Toner Reset Guide

March 8, 2004

Certain printers require that you reset either the drum counter or the toner low warning. This guide will help you reset the printer. All brand names and models are registered trademarks of their respective companies.

Brother HL-630 OPC Brother Cartridge Part #DR-100

OEM Stated Yield: 11-15,000

This cartridge does not use any type of reset procedure. These cartridges according to the Brother manual should be replaced whenever the copy quality deteriorates. Since this could occur almost at any time, there is no need to have a counter. We only included it here because all of the other Brother engines DO have some sort of reset procedure.

Brother HL-720 OPC Brother Cartridge Part #DR-200

OEM Stated Yield: 20,000

New drum cartridges come with a clear "Starter Sheet" installed inside the cartridge. When the cartridge is installed and the cover closed, the printer will eject the sheet and at the same time, reset the drum counter. This sheet is also present in the DR300 cartridges. Full size copies of the sheet are available on our web site

Brother Intellifax 2800/2900/3800 OPC Brother Cartridge Part #DR-250

OEM Stated Yield: 20,000 (Also used in the DCP-IOOO/MFC-4800 and MFC-6800)

New drum cartridges come with a clear "Starter Sheet" installed inside the cartridge. Install the cartridge but keep the cover open. Press the "CLEAR" button to show the drum status, The display will show REPLACE DRUM? 1. YES 2. NO Press" 1" on the telephone keypad. The counter is reset! Full size copies of the sheet are available on our web site

Brother HL-I040 OPC Brother Cartridge Part #DR-300

OEM Stated Yield: 20,000

New drum cartridges come with a clear "Starter Sheet" installed inside the cartridge. When the cartridge is installed and the cover closed, the printer will eject the sheet and at the same time, reset the drum counter. This sheet is also present in the DR200 cartridges. Full size copies of the sheet are available on our web site

Brother HL-1240 OPC Brother Cartridge Part #DR-400

OEM Stated Yield: 20,000

Fax Machines (DCP Machines also)

After replacing the drum unit, keep the front cover open and press "Clear". The display will show "Replace Drum? 1.Yes 2.No" Press "1" the display will show "Accepted", close the front cover. The counter is reset!

Laser Printers

Open the front cover. Locate the black button under the LED lights on the left side. Press and hold in the button until all the lights are lit. Release the button. The counter is reset!

Brother HL-1650 OPC Brother Cartridge Part #DR-500

OEM Stated Yield: 20,000

After replacing the drum unit, keep the front cover open (make sure the power is on). Press and hold the "GO" button for four seconds, the display will then show "DRUM CLEAR". Close the front cover. The counter is reset!

Brother HL-3260N OPC Brother Cartridge Part #DR-1200

OEM Stated Yield: 60,000

The HL-3260 is Brothers first high speed printer. The drum cartridge comes with three RED sheets and two pieces of tape installed on the cartridge. There is a possibility that there is developer inside the drum cartridge. Removal of these is what seems to reset the counter, or there may not be a counter that has to be reset. These cartridges are still being investigated.

Brother HL-7050 OPC Brother Cartridge Part #DR-700

OEM Stated Yield: 40,000

The HL-7050 is brother's newest printer line. It is a variation on the 460/560 cartridges. After replacing the drum unit, keep the top cover open (make sure the power is on). Press and hold the "GO" button for four seconds, the display will then show "DRUM CLEAR". Close the top cover. The counter is reset.

Canon LBP-CX HP Cartridge Part # (92285A)

OEM Stated Yield: 2,500

These cartridges have a color wheel that indicates the approximate amount of toner left in the cartridge. This wheel does not actually stop the machine, it only gives the user a visual indication. The wheel assembly consists of a small gear train that drives a geared color wheel. The gear assembly is calibrated for 5% pages, so it is very possible that you have an empty cartridge with a green wheel showing, or a half full cartridge with a red wheel showing. It all depends on how much toner is used per page.

To reset the counter, remove the clear cover from the counter by releasing the 4 tabs. Carefully remove the small gear next to the color wheel and turn the wheel so that the notched area is up. Insert the small gear so that the teeth of both the small gear and the wheel just start to engage. Carefully snap the cover back on. If you slip and the small gears jump out of place, just alternate them from the middle to one side. The opposite side is empty. It doesn't matter which side you choose.

Canon NP-1010/1020/C-100 OPC \ Canon Cartridge Part # F43-2101-700

OEM Stated Yield: 15-20,000

The copier will show "Replace Drum" when the waste chamber fills up with toner. The cartridge brought in for service.

Canon NP-6012/C-120/6412 OPC Canon Cartridge Part # F43-5411-700 (NPG-11)

OEM Stated Yield: 30,000

To reset the counter in the NP-6012/6412/C-120 OPC cartridges the connector on the rear of the cartridge must be replaced. New replacement chips are available with the housing. Unscrew the old connector and replace with the new. These drums are rated for 30,000 pages.

Canon NP-6016/C-160 OPC Canon Cartridge Part # F43-4921-700 (NPG-9)

OEM Stated Yield: 40,000

The drum unit for these cartridges is rated for 40,000 pages. The machine will show "Replace Drum" at 40,000 pages or when the waste toner section is full. These cartridges have a reset chip built into the connector. This connector must be reset before a rebuilt cartridge will work. Currently no new replacements are available, but there are some companies that will reset the OEM chip for you.

Canon NP-6521/C-200 OPC Canon Cartridge Part # F43-4921-700 (NPG-9)

OEM Stated Yield: 50,000

These machine use the same cartridge as the NP6016, but the yield is 50,000 not 40,000. Since the same chip is used, the decision must be made by the machine not the cartridge. The drum unit for these cartridges is rated for 50,000 pages. The machine will show "Replace Drum" at 50,000 pages or when the waste toner section is full. These cartridges have a reset chip built into the connector. This connector must be reset before a rebuilt cartridge will work. Currently no new replacements are available, but there are some companies that will reset the OEM chip for you.

Canon PC-2000 Canon Cartridge Part # A-20)

OEM Stated Yield: 2,000

These cartridges have a color wheel that indicates the approximate amount of toner left in the cartridge This wheel does not actually stop the machine; it only gives the user a visual indication. The wheel assembly. consists of a small gear train that drives a geared color wheel. The gear assembly is calibrated for 5% pages, so it is very possible that you have an empty cartridge with a green wheel showing, or a half full cartridge with a red wheel showing. It all depends on how much toner is used per page. To reset the counter, remove the clear cover from the counter by releasing the 4 tabs. Carefully remove the small gear next to the color wheel and turn the wheel so that the notched area is up. Insert the small gear so that the teeth of both the small gear and the wheel just start to engage. Carefully snap the cover back on. If you slip and the small gears jump out of place, just alternate them from the middle to one side. The opposite side is empty. It doesn't matter which side you choose.

Canon PC-Mini Canon Cartridge Part # (A-30)

OEM Stated Yield: 3,000

These cartridges have a color wheel that indicates the approximate amount of toner left in the cartridge. This wheel does not actually stop the machine, it only gives the user a visual indication. The wheel assembly. consists of a small gear train that drives a geared color wheel. The gear assembly is calibrated for 5% pages, so it is very possible that you have an empty cartridge with a green wheel showing, or a half full cartridge with a red wheel showing. It all depends on how much toner is used per page. To reset the counter, grasp the color wheel in your right hand, the gear assembly in your left. While bending the wheel down, turn the wheel away from you until it stops. You will hear a slight grinding. That is fine as long as the wheel turns fairly easily. If the wheel is hard to turn, you are not bending the wheel down far enough and may damage the gears. This can also be done by removing the cover, removing the gear next to the wheel, and resetting the wheel gear.

Canon PC-850 Canon Cartridge Part # F100 (F41-9921)

OEM Stated Yield: 10,000

If the "Replace Cartridge" light is still lit in the display after replacing the cartridge, the customer can follow the steps below to reset the copier. This procedure should be done every time the cartridge is replaced:

Hold down the "A" (Automatic Exposure) key for approximately four (4) seconds or longer. After approximately four (4) seconds have elapsed, "UC" appears in the Copy quantity/Copy ratio display. Press the "Start" key. "UC" will flash for about 20 seconds in the Copy quantity/Copy ratio display. The copier will automatically perform a toner distribution operation, and then you will return to the normal copying mode.

NOTE: - Be sure to press the "A" key after replacing each cartridge. If you do not, your first few copies will not be clear copy images or the Replace Cartridge indicator may light. If either of these two problems occurs, press the main unit power switch to OFF and then to ON again. Afterwards, perform the above steps. If copies are too dark or too light after you have replaced the cartridge, open the front door and adjust the copy exposure using the exposure re-calibration slide control switch.

DEX 625 (Samsung SF-5500) Dex Cartridge Part # 6950

OEM Stated Yield: 12,000

This cartridge is actually two separate cartridges, a toner and a drum cartridge. They are sold as one unit under part # 6950. There are two reset procedures that must be followed in order to have this cartridge operate properly. On the drum unit there is a glass fuse that must be replaced. The fuse is a 125V,1O0mA,5x20mm fast acting glass type. Once the cartridge(s) have been installed, you must perform the toner initialization. Press FUNCTION, 7, YES, NO, YES, YES. The machine is reset!

Fuji-Xerox XP-11 Toner & OPC (Xerox 4030)Xerox Part #'s 6R281/13R32

OEM Stated Yield: 20,000

With the printer off, press and hold the reset button located next to the power cord. While still holding the reset button in, turn the power on. The reset procedure is the same for both the toner and drum cartridges.

Goldstar GL-660(Xerox W.C. Pro 610)6RO0833 Toner, 13RO0532 OPC

Toner: 5,000 pages, OPC: 10,000 Pages

Toner: With the Machine on, open the access cover. Press "MENU", Press "6", Press "3", Press "CLEAR", Press "ENTER"

OPC Drum : With the Machine on, open the access cover. Press "MENU", Press "6", Press "4", Press "CLEAR", Press "ENTER.

HP Color Laser Jet 2500 HP Black # C9700A, Cyan C9701A, Magenta C9703A, Yellow C9702A

OEM Stated Toner Yield: 5000 Black, 4000 Color

These cartridges have what HP now calls "Smart Chips" (We call them ARDs-Anti Recycling Devices). Similar to the HP-4100, these chips monitor toner usage, Internet supplies ordering, and a new feature, remote troubleshooting. These cartridges are toner only, there is a separate drum unit part number C9704A that is rated for 20,000 pages black, or 5,000 pages color. Toner and chips are in development.

HP Color LaserJet 4500 (Canon LBP-83X}

HP-4500 General Note: If the transfer belt kit or Fuser is replaced before the change fuser/transfer messages are displayed, placing a new part in the machine may not reset the counter. Reset procedures for these parts are included here.

OPC Cartridge HP OPC Part # C4195A

OEM Stated Yield: 25,000

These cartridges have an ARD installed on the left side of the cartridge. The chip is actually just an IC plugged into a socket on the back of the electrical connector, which can easily be changed. It would seem that HP or Canon has plans to recycle these cartridges. Even though they look the same, the programming on these chips is different from the HP-8500.

New reset chips are now available to reset these cartridges. Drums and chips should be sold as a set as the chip contains information about the drum sensitivity. These cartridges also have windows that work with an optical sensor inside the printer that determines if the waste chamber is full or not. It is more than likely that if the waste chamber fills up, the machine will shut down. We are not sure if the cartridge waste chamber is cleaned out, it will continue to run until the chip finishes its page count. The Canon version of this printer is the CLBP460PS. The chip also contains information on the characteristics of the drum that is used during the calibration sequence.

HP Color LaserJet 4500 Transfer Belt HP OPC Part # C4196A

OEM Stated Yield: 100,000 Black, 25,000 Color

Press the menu button until "RESET MENU" is displayed. Press the "ITEM" button until "NEW TRANSFER KIT, SELECT IF DONE" is displayed. Press the "SELECT" button. Press the "ITEM" button until the "INFORMATION" menu is displayed. The display should show "TRANSFER KIT = 100% LIFE REMAINING. The counter is reset!

HPColor LaserJet 4500 Fuser HP OPC Part # C4197A

OEM Stated Yield: 100,000 Black, 50,000 Color

Press the menu button until "RESET MENU" is displayed. Press the "ITEM" button until "NEW FUSER KIT, SELECT IF DONE" is displayed. Press the "SELECT" button. Press the "ITEM" button until the "INFORMATION" menu is displayed. The display should show "FUSER = 100% LIFE REMAINING. The counter is reset!

HP Color LaserJet 4600 HP Black # C9720A, Cyan C9721A, Magenta C9723A, Yellow C9722A

OEM Stated Yield: 9000

These cartridges have what HP now calls "Smart Chips" (We call them ARDs-Anti Recycling Devices). Similar to the HP-4100, these chips monitor toner usage, Internet supplies ordering, and a new feature, remote troubleshooting. These cartridges are "all in one" type cartridges where each color is self contained (Toner, drum etc.). An interesting change is that if the chips are removed from the cartridge mid cycle, the machine will not accept the cartridge and will not print. Further testing is needed to see if once a cartridge actually runs out, if it can be refilled with the old chip. Toner and chips are in development.

HP Color LaserJet 5500 HP Black # C9730A, Cyan C9731A, Magenta C9733A, Yellow C9732A

OEM Stated Yield: 13,000 Black, 12,000 Color

These cartridges have what HP now calls "Smart Chips" (We call them ARDs-Anti Recycling Devices). Similar to the HP-4100, these chips monitor toner usage, Internet supplies ordering, and a new feature, remote troubleshooting. These cartridges are "all in one" type cartridges where each color is self contained (Toner, drum etc) These machines also use a Transfer unit Part Number C9734A rated for 120,000 pages. Toner and chips are in development.

HP Color LaserJet 8500 OPC [Canon LBP-82X)HP OPC Part # C4153A

OEM Stated Yield: 50,000

These cartridges have an ARD installed on the left side of the cartridge. The chip is actually just an IC plugged into a socket on the back of the electrical connector, which can easily be changed. It would seem that HP or Canon has plans to recycle these cartridges. Even though they look the same, the programming on these chips is different from the HP-4500. New reset chips are now available to reset these cartridges. Drums and chips should be sold as a set as the chip contains information about the drum sensitivity. These cartridges also have windows that work with an optical sensor inside the printer that determines if the waste chamber is full or not. It is more than likely that if the waste chamber fills up, the machine will shut down. We are not sure if the cartridge waste chamber is cleaned out, it will continue to run until the chip finishes its page count. The chip also contains information on the characteristics of the drum that is used during the calibration sequence.

HP DeskJet 2000 HP Part # C4840A/44A (Black) C4841A (Cyan), C4843A(Magenta), C4842A(Yellow)

The chips on the HP DeskJet 2000 series cartridges use the same technology as the newer HP4100/9000. The physical package is different, but the programming is basically the same. New replacement chips or a reset box should be available soon. The chip contains information on the date of manufacture, expiration date, color, ink volume, and current ink status. As far as we can tell, the chip does not shut the machine down.

HP LaserJet 1300 HP Part # Q2613A/X

OEM Stated Yield: 2,500/4,000

The HP-1300 uses the second generation black toner cartridge ARD's. These chips (ARD's) only monitor toner usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. Since these machines do not have a display, only the supplies status page will show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer. These chips are physically different from the first generation 4100 chip. The 4100 is encased in a black plastic case, and uses RF (radio frequency) technology to communicate with the printer. The 1300 chip looks identical to the 2300/4200/4300 chips. They are not encased at all. The chip board is bright green in color. It also has two contact pads where the chip touches contacts in the machine. This is how the chip communicates with the printer, a much simpler and cheaper method. HP apparently no longer cares about public opinion on these chips as they are bright green in color, and placed on the top of the cartridge, where they are impossible to miss. Although all the second generation chips all look the same, the coding is different. As with the 4100 chips, the machine will have a complete history of all the HP and non-HP cartridges used! This may play a part when warrant repairs are needed. Replacement chips are now being developed.

HP LaserJet 2300 HP Part # Q2610A

OEM Stated Yield: 6,000

The HP-2300 uses the second generation black toner cartridge ARD's. These chips (ARD's) only monitor toner usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. The main display will then show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer.

These chips are physically different from the first generation 4100 chip. The 4100 is encased in a black plastic case, and uses RF (radio frequency) technology to communicate with the printer. The 2300 chip looks identical to the 1300/4200/4300 chips. They are not encased at all. The chip board is bright green in color. It also has two contact pads where the chip touches contacts in the machine. This is how the chip communicates with the printer,

HP DeskJet 2000 HP Part # C4840A/44A (Black) C4841A (Cyan), C4843A(Magenta), C4842A(Yellow)

The chips on the HP DeskJet 2000 series cartridges use the same technology as the newer HP4100/9000. The physical package is different, but the programming is basically the same. New replacement chips ora reset box should be available soon. The chip contains information on the date of manufacture, expiration date, color, ink volume, and current ink status. As far as we can tell, the chip does not shut the machine down.

HP LaserJet 1300 HP Part # Q2613A/X

OEM Stated Yield: 2,500/4,000

The HP-1300 uses the second generation black toner cartridge ARD's. These chips (ARD's) only monitor toner usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. Since these machines do not have a display, only the supplies status page will show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer.

These chips are physically different from the first generation 4100 chip. The 4100 is encased in a black plastic case, and uses RF (radio frequency) technology to communicate with the printer. The 1300 chip looks identical to the 2300/4200/4300 chips. They are not encased at all. The chip board is bright green in color. It also has two contact pads where the chip touches contacts in the machine. This is how the chip communicates with the printer, a much simpler and cheaper method. HP apparently no longer cares about public opinion on these chips as they are bright green in color, and placed on the top of the cartridge, where they are impossible to miss. Although all the second generation chips all look the same, the coding is different.

As with the 4100 chips, the machine will have a complete history of all the HP and non-HP cartridges used! This may playa part when warrant repairs are needed. Replacement chips are now being developed.

HP LaserJet 2300 HP Part # Q2610A

OEM Stated Yield: 6,000

The HP-2300 uses the second generation black toner cartridge ARD's. These chips (ARD's) only monitor toner usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. The main display will then show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer. These chips are physically different from the first generation 4100 chip. The 4100 is encased in a black plastic case, and uses RF (radio frequency) technology to communicate with the printer. The 2300 chip looks identical to the 1300/4200/4300 chips. They are not encased at all. The chip board is bright green in color. It also has two contact pads where the chip touches contacts in the machine. This is how the chip communicates with the printer,

HP LaserJet 4100 HP Part # C8061X (1 OK) HP Part # C8061A

OEM Stated Yield: 6,000

The HP-4100 is the first HP black toner cartridge to use an ARD. Unlike other chips, these only monitor usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. The main display will then show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer. In a March 2001 interview with the Hard Copies Supplies Journal, an HP spokesperson stated the following: "Regarding steps taken to prevent the cloning of smart chips, because HP's design process is customer focused, we have not taken steps to prevent clone chips from being used or to prevent resetting of the chips as ' done with the Fuji-Xerox engine based machines." While this statement certainly addresses the re-use of the new cartridges, it is doubtful that they will look kindly on resetting these chips so that the printer thinks it is a genuine HP cartridge. It should be noted that if the chip is removed, the printer's performance changes. Weare still testing but it seems that the printer runs much darker, reducing the yield of the cartridge. It is also possible that reusing an old chip may do the same but to a lesser extent. Further testing on this is being conducted. Another possible use of this chip is when warranty repairs are needed. The machine will have a complete history of all the HP and non-HP cartridges used! Replacement chips are now becoming available

HP Laser J et 4200 HP Part # Q1338A

OEM Stated Yield: 12,000

The HP-4200 uses the second generation black toner cartridge ARD's. These chips (ARD's) only monitor toner usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. The main display will then show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer.

These chips are physically different from the first generation 4100 chip. The 4100 is encased in a black plastic case, and uses RF (radio frequency) technology to communicate with the printer. The 4200 chip looks identical to the 1300/2300/4300 chips. They are not encased at all. The chip board is bright green in color. It also has two contact pads where the chip touches contacts in the machine. This is how the chip communicates with the printer, a much simpler and cheaper method. HP apparently no longer cares about public opinion on these chips

as they are bright green in color, and placed on the top of the cartridge, where they are impossible to miss. Although all the second generation chips all look the same, the coding is different.

As with the 4100 chips, the machine will have a complete history of all the HP and non-HP cartridges used! This may playa part when warrant repairs are needed. Replacement chips are now being developed.

HP Laser Jet 4300 HP Part # Q1339A

OEM Stated Yield: 18,000

Like the HP-4200, the HP-4300 uses the second generation black toner cartridge ARD's. These chips (ARD's) only monitor usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. The main display will then show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer. These chips are physically different from the first generation 4100 chip. The 4100 is encased in a black plastic case, and uses RF (radio frequency) technology to communicate with the printer. The 4300 chip looks identical to the 1300/2300/4300 chips. They are not encased at all. The chip board is bright green in color. It also has two contact pads where the chip touches contacts in the machine. This is how the chip communicates with the printer, a much simpler and cheaper method. HP apparently no longer cares about public opinion on these chips as they are bright green in color, and placed on the top of the cartridge, where they are impossible to mISS. As with the 4100 chips, the machine will have a complete history of all the HP and non-HP cartridges used! This may playa part when warrant repairs are needed. Replacement chips are now being developed.

HP Laser J et 9000 HP Part # C4583X

OEM Stated Yield: 30,000

Like the HP-4100, the 9000 cartridge also uses a chip. The chip in the 9000 is the same as the 4100 in that they only monitor usage not page counts. Each chip also has it's own serial number which in effect gives the cartridge a serial number. After the OEM toner has been used up, the "toner low reached" code will be set to YES on the cartridge chip. Even after the cartridge is refilled, the printer display will still show "Toner Low" for the supplies status section of the menu. The main display will then show "Non HP Toner cartridge". If the chip is removed, the toner low sensors will be disabled, and will not work again until a new HP cartridge is installed. These sensors also track toner usage per page, and predict the expected yield of the cartridge so this may be an issue with your customer. In a March 200 1 interview with the Hard Copies Supplies Journal, an HP spokesperson stated the following: "Regarding steps taken to prevent the cloning of smart chips, because HP's design process is customer focused, we have not taken steps to prevent clone chips from being used or to prevent resetting of the chips as done with the Fuji-Xerox engine based machines." While this statement certainly addresses the re-use of the new cartridges, it is doubtful that they will look kindly on resetting these chips so that the printer thinks it is a genuine HP cartridge. Another possible use of this chip is when warranty repairs are needed. The machine will have a complete history of all the HP and non-HP cartridges used!

Kyocera F-IOOO OPC Kyocera OPC Part # DK-3

OEM Stated Yield: 10,000

There is a small black fuse located on the board inside the cartridge. This fuse must be replaced each cycle by un-soldering the old and soldering in the new. This fuse is a special 250mA one that should be purchased from your supplier. The same fuse is used in the F-3010 OPC Cartridge.

Kyocera F-3010 OPC Kyocera OPC Part # DK-2

OEM Stated Yield: 10,000

There is a small black fuse located on the board inside the cartridge. This fuse must be replaced each cycle by un-soldering the old and soldering in the new. This fuse is a special 250mA one that should be purchased from your supplier. The same fuse is used in the F-IOOO OPC Cartridge.

Lexmark Optra Se Lexmark Cartridge Part # 12A0825 (Prebate), 12A0725 (Non Prebate)

OEM Stated Yield: 23,000 (Both)

(Lexmark does not currently produce a low yield cartridge.)The "Prebate" cartridges have an ARD installed on the top left side of the cartridge. The packaging for the chip looks more like a battery than a chip, but it is definitely a chip. This package allows a special reader inside the machine to read the chip with out any wires connecting it. New replacement chips are now available that work in both the Optra T and Optra SE series. Do not confuse the Optra T series with the T series; they are not the same. See below for more information. Other vendors such as Toshiba are also using this engine. The replacement chips for the Lexmark cartridges will not work in these printers. Contact your vendor for the correct chips. On the Non-Prebate cartridges however, the chip is also present, but the killer part is not active. These cartridges can be re-manufactured as much as you want, the chip will not interfere.

Lexmark 4023 [Optra W820) Lexmark Cartridge Part # 12BO090

OEM Stated Yield: 5840/5740: 10,000.5845/5745: 25,000

The "Prebate" cartridges have an ARD on a small board located inside the right end cap of the cartridge. Unlike other Lexmark chips, the board for these cartridges has two contact pads where the machine makes direct contact. New replacement chips ARE available NOW. On the Non-Prebate cartridges the chip is also present, but the killer part is not active. These cartridges can be remanufactured as much as you want, the chip will not interfere.

Lexmark 4069 (Optra T)Lexmark Cartridge Part # 12A5840/12A5845 (Prebate), 12A5740/12A5745 (Non Prebate)

OEM Stated Yield: 5840/5740: 10,000. 5845/5745: 25,000

The "Prebate" cartridges have an ARD installed on the top left side of the cartridge. The packaging for the chip looks more like a battery than a chip, but it is definitely a chip. This package allows a special reader inside the machine to read the chip with out any wires connecting it. New replacement chips are now available that work in both the Optra T and Optra SE series. Do not confuse the Optra T series with the T series; they are not the same. See below for more information. Other vendors such as Toshiba are also using this engine. The replacement chips for the Lexmark cartridges will not work in these printers. Contact your vendor for the correct chips. On the Non-Prebate cartridges the chip is also present, but the killer part is not active. These cartridges can be re-manufactured as much as you want, the chip will not interfere.

Lexmark 4045 (Optra M),Lexmark Cartridge Part # 17G0152/17G0154 (4KO0198/4KO0199 Discontinued)

OEM Stated Yield: 0152: 5,000, 0154: 15,000

Included here only because of the physical similarity to the other Optra S, Se. & T. These cartridges do not have any chips, or anything else that has to be reset. They even eliminated the Yield Wheel! At this time there are only "standard" cartridges, Prebate cartridges have not been released, and there does not seem to be any plans for Lexmark to do so.

Lexmark 4500 (E320/322), Lexmark Cartridge Part # 08A0476/08A0478 (Prebate), 08A0477 (Non Prebate))

OEM Stated Yield: 0476: 3,000, 00478/0477: 6,000

The "Prebate" cartridges have an ARD on a small board located inside the right end cap of the cartridge. Unlike other Lexmark chips, the board for these cartridges has two contact pads where the machine makes direct contact. New replacement chips are available now. On the Non-Prebate cartridges the chip is also present, but the killer part is not active. These cartridges can be re-manufactured as much as you want, the chip will not interfere.

Lexmark T420 Lexmark Cartridge Part # 12A7410/12A7415

OEM Stated Yield: 12A74IO 5,000: 12A7415 10,000

The "Prebate" cartridges have an ARD installed on the front left side of the cartridge, (as the cartridge would be inserted

into the machine). Other vendors such as Toshiba and IBM, and Dell are also using this engine. The replacement chips (when available) for the Lexmark cartridges will not work in these printers. Contact your vendor for the correct chips. On the Non-Prebate cartridges however, the chip is also present, but the killer part is not active. These cartridges can be re-manufactured as much as you want, the chip will not interfere.

Lexmark T520/522 Lexmark Cartridge Part # 12A6730/12A6830 12A6735/12A6835

OEM Stated Yield: 6730/68307,5,000: 6735/6835 20,000

The "Prebate" cartridges have an ARD installed on the right side of the cartridge, (as the cartridge would be inserted into the machine). These chips are physically located in a different spot from the older Optra T cartridges. New replacement chips are now available. Other vendors such as Toshiba and IBM are also using this engine. The replacement chips for the Lexmark cartridges will not work in these printers. Contact your vendor for the correct chips. On the Non-Prebate cartridges however, the chip is also present, but the killer part is not active. These cartridges can be re-manufactured as much as you want, the chip will not interfere. The "T520/522", "T620/622" and Optra T/SE series all use different chips. None are interchangeable.

Lexmark T620/622 Lexmark Cartridge Part # 12A6760/12A6860 12A6765/12A6865

OEM Stated Yield: 6760/6860 10,000: 6765/6865 20 000

The "Prebate" cartridges have an ARD installed on the right side of the cartridge, (as the cartridge would be inserted into the machine. These chips are physically located in a different spot from the older Optra T cartridges. New replacement chips are now available. Other vendors such as Toshiba and IBM are also using this engine. The replacement chips for the Lexmark cartridges will not work in these printers. Contact your vendor for the correct chips. On the Non-Prebate cartridges however, the chip is also present, but the killer part is not active. These cartridges can be re-manufactured as much as you want, the chip will not interfere. The "T520/522", "T620/622" and Optra T/SE series all use different chips. None are interchangeable.

Lexmark T630 Lexmark Cartridge Part # 12A 7360/12A 7362 12A7365

OEM Stated Yield: 5K/21K/32K/ Respectively

The "Prebate" cartridges have an ARD installed on the right side of the cartridge, (as the cartridge would be inserted into the machine). These chips are physically located in same spot as the T520/T620 chips. Other vendors such as Toshiba, IBM, and Dell are also using this engine. The replacement chips for the Lexmark cartridges will not work in these printers. Contact your vendor for the correct chips. On the Non-Prebate cartridges however, the chip is also present, but the killer part is not active. These cartridges can be re-manufactured as much as you want, the chip will not interfere. The "T520/522", "T620/622", T630 Series and Optra T/SE series all use different chips. None are interchangeable.

Minolta Color Pa2e Works Minolta Part # 1710437-001 (Black), 1710437-004 (Cyan), 1710437-003 (Magenta), 1710437-002 (Yellow) **Old Minolta Part Numbers 0940-501/701/401/601 Discontinued * *

OEM Stated Yield: 20,000 (Minolta and Lexmark)

Lexmark Optra SC 1275 Toner Lexmark Part # 1361751 (Black), 1361752 (Cyan), 1361753 (Magenta), 1361754 (Yellow)

The Minolta Color PageWorks Toner cartridges all have a glass fuse located under the two metal contacts on the bottom of the cartridge. The replacement fuse is a fast acting, 5 x 20mm, 250V, 80mA, glass type. These fuses should be replaced every cycle. The Minolta and Lexmark cartridges are NOT interchangeable. The small fins on the bottom of each are in different locations. These fins will block the installation of the wrong cartridge into the machine. The same fuses are used for both cartridge types.

Mita LDC-650 Mita Cartridge Part # 63582010, Pitney Bowes Part # 9640

OEM Stated Yield: 10,000

On the gear side of the cartridge there is a large white gear with a floating tab mechanism that has two notches in it. For the machine to accept the cartridge as new, the tab must be set so that the outermost notch is engaged. Be careful to reset this tab after testing, as it will automatically move to the inner notch every time the cartridge is installed. If the tab is left in this position, the machine will show change cartridge when the cartridge is installed.

NEC LC-800 oPC NEC OPC Cartridge Part # 20-020

OEM Stated Yield: 7,000

With the power on, open the cover.

Press and hold the PC RESET button down. While continuing to press the button, insert the OPC cartridge. Release the button and close the door. Press the ONLINE button. The counter is reset

OKIDATA DRUM CARTRIDGES

Okidata over the years has released a lot of printers/fax machines all with different engines. Unfortunately almost all of them require a different reset procedure. In fact even some of the machines that use the same engine have different reset procedures! The following procedures are grouped by the Engine, (underlined), and then by the machine model number/so The machine model numbers are also in a slightly smaller point size. The first engine is the Okidata OL-400/800, but the first actual reset procedure is for the OL-800 series only, followed by other machines that use the same engine but have different reset procedures. Just to make things a little crazier, there are also machines that use different engines, but use the same reset procedure. These are grouped as above, but with a note that says what other machines also use that procedure. Hopefully this will help clear up some of the confusion on what procedures to use.

Okidata OL-400/800 OPC Okidata OPC cartridge part # 561'06601

Although all of these machines use the same cartridge, the reset procedures are different.

Reset procedure for the Okidata OL-800 Series Printers

Turn off the printer. While holding the MENU lIMENU2 button down, turn the printer back on. Keep holding the button down until you see "MAINTENANCE MODE" on the display panel. Release the button. Press the MENUlIMENU2 button three times. The display will read "DRUM COUNT RESET". Press the ENTER/QUIET button. The display will read "DRUM COUNT RESET RESETTING", then "INITIALIZING", then "WARMING UP", and finally "ON LINE". The counter is reset!

Reset procedure for all other OL series Laser Printers.

Turn the printer off. Press and hold the RESET button (not the Menu Reset), and turn the printer on. Hold the button dow until you see "DRUM RESET" on the display. Release the button.

Run a self-test. Turn the printer off-line and press the PRINT. FONT/SELF TEST button once and release. The printer will print out a page with the installed fonts, and the page count of the printer.

Reset procedure for the "DOC-IT" Document Processing Systems.

Turn the DOC-IT on, and re- initialize it: either reboot the computer, or type DOCIT at the DOS prompt and press enter. Press and hold the ENTER key for 3 seconds, when you release it you should see "Administration" on the display. Press the down arrow key until you see: Reset drum ctr? YES/NO. Press the left arrow key to move the check mark next to "YES". Then Press ENTER. Press any key to leave the Administration menu. The counter is reset!

Okidata OL-400e OPC Okidata OPC Cartridge Part # 56116801

(The procedure for these machines is the same as used for the Okidata OL-1200, OP-20)

Turn off the printer

While holding the MENUlIMENU2 button down, turn the printer back on. Keep holding the button down until you see USER MNT on the display panel. Release the button.

Press the MENUI/MENU2 button three times. The display will read DRUM CTR RESET.

Press the ENTER button. The display will read WARMING UP, and finally ON LINE.

The counter is reset!

OL-600e/610e Okidata OPC Cartridge Part # 56116801

OEM Stated Yield: 20,000

(The procedure for these machines is the same as used for the Okidata OP-6e, OL-600e, OP-IOe, OP14e)

From the computer the printer is directly hooked up to, enter the Printer Status Monitor.

Click on the "Settings" Tab.

Under "Reset Item" click "Drum Count", and then "Reset" .

The Counter is reset!

OkiPage 6e Okidata OPC Cartridge Part # 56116801

OEM Stated Yield: 20,000

(The procedure for these machines is the same as used for the Okidata OP-6e, OL-600e, OP-lOe, and OP-l4e)

From the computer the printer is directly hooked up to, enter the Printer Status Monitor.

Click on the "Printer Menu" tab.

Click on the "Maintenance" tab.

Click on the "Drum Counter Reset" tab.

The Counter is reset!

OkiFax 1000/1050/5300/5400/5600/5650 Okidata OPC Cartridge Part # 56116901

OEM Stated Yield: 20,000

(The procedure for these machines is the same as for the OP-4W, and the OP-8W)

Wait until the time, date and answering mode appear on the display. Then press the Select Function key. Press the 7/Counter Display One Touch Key. The display shows Drum Count. Press the Yes (left arrow) key to clear the counter Press the select Function key to finish. The Counter is reset

OkiFax 2400/2600 Okidata OPC Cartridge Part # 56116901

OEM Stated Yield: 20,000

Unlike Most of the other Okidata printer/Fax machines, there is also a counter that must be reset for the toner cartridge! The following information will allow you to reset the toner, Drum, Machine, and the fuser page count. Okidata strongly recommends that the Machine Page Count, and the Fuser Page Count be left alone.

Wait until the time, date and answering mode appear on the display. Then press the "Select Function" key. Press the "28/Print Counter" key. This first counter

is the Machine Page Count. Leave this counter alone! Press the "Yes/Left Arrow" key. The page count of the toner cartridge will show on the display. To reset the Toner Count press the "Right Arrow/No" key. To bypass this counter, press the "Yes/Left Arrow" key. If you pressed the "No" key, the display will say "Toner Count Clear?" Press the "Yes/Left Arrow" key. Then "Are You Sure?" will display. Press the "Yes/Left Arrow" key again to reset the toner count.

The next counter that will display is the Drum Count. If you have just replaced the drum cartridge and need to reset the drum counter, Press the "Right Arrow/No" key. The display will ask if you want to clear the counter. Press the "Yes/Left Arrow" key twice. If you only wish to view the drum count without resetting it, press the "Yes/Left Arrow" key instead of the "No" key. The next counter to show on the display is the Fuser. Press the "Select Function" key to return to the standby mode.

Okidata OL-1200 OPC Okidata OPC Cartridge Part # 56118801

OEM Stated Yield: 30,000

(The procedure for these machines is the same as used for the Okidata OL-400e, and OP-20)

Turn off the printer

While holding the MENUlIMENU2 button down, turn the printer back on. Keep holding the button down until you see USER MNT on the display panel. Release the button.

Press the MENUl/MENU2 button three times. The display will read DRUM CTR RESET.

Press the ENTER button. The display will read WARMING UP, and finally ON LINE. The counter is reset!

Okidata OP-4W Okidata OPC Cartridge Part # 56114101

OEM Stated Yield: 10,000

(The procedure for these machines is the same as for the OkiFax 1000/1050/5300/5600, but with a different cartridge).

Wait until the time, date and answering mode appear on the display. Then press the Select Function key. Press the 7/Counter Display One Touch Key. The display shows "Drum Count". Press the Yes (left arrow) key to clear the counter Press the select Function key to finish.

Okidata OP-8W Okidata OPC Cartridge Part # 40709901 (Type 6) (Okidata OP-6W/8W/OkiOffice 84)

OEM Stated Yield: 10,000

(Again, the procedure for these machines is the same as for the OkiFax 1000/1050/5300/5600, and the OP-4W, but with a different cartridge).

Wait until the time, date and answering mode appear on the display. Then press the Select Function key. Press the 7/Counter Display One Touch Key. The display shows "Drum Count".

Press the Yes (left arrow) key to clear the counter Press the select Function key to finish.

Okidata OP-IOe Okidata OPC Cartridge Part #40433305 (Type 5)

OEM Stated Yield: 20,000

(The procedure for these machines is the same as used for the Okidata OP-6e, OL-600e, OP-14e)

From the computer the printer is directly hooked up to, enter the Printer Status Monitor. Click on the "Printer Menu" tab. Click on the "Maintenance" tab. Click on the "Drum Counter Reset" tab.

Okidata OP-14e Okidata OPC Cartridge Part #41331601(Type 8)

OEM Stated Yield: 20,000

(The procedure for these machines is the same as used for the Okidata OP-6e, OL-600e, OP-I Oe)

From the computer the printer is directly hooked up to, enter the Printer Status Monitor. Click on the "Printer Menu" tab. Click on the "Maintenance" tab. Click on the "Drum Counter Reset" tab.

Okidata OP-20/24 OPC Okidata OPC Cartridge Part # 40468701

OEM Stated Yield: 30,000

(The procedure for these machines is the same as used for the Okidata OL-400e, OP-20, & OP-24)

Turn off the printer. While holding the MENU1IMENU2 button down, turn the printer back on. Keep holding the button down until you see USER MNT on the display panel. Release the button. Press the MENUl/MENU2 button three times. The display will read DRUM CTR RESET. Press the ENTER button. The display will read WARMING UP, and finally ON LINE. The counter is reset!

OkiFax 5700/5900 Okidata OPC Cartridge Part # 40433308

OEM Stated Yield: 20,000

Press the "Menu/Exit" key. Press the "Down Arrow" until the display shows "Counter". Press "Enter" twice. Press "Clear" twice. Press the "Menu/Exit" key. The counter is reset!

Panasonic KXP-4400 OPC Cartridge Panasonic OPC Cartridge part # KX-PDM6

OEM Stated Yield: 6,000

This cartridge uses an optical reset. The waste chamber must be spotless!! There is a float inside that moves up as the waste toner increases. There is a small clear piece of plastic on the waste chamber with a black plastic float inside. This must be spotless and the float should be at the base. If this piece is dusty, or the float is up the printer will not reset.

Panasonic KXP-4410 OPC Cartrid2e Panasonic OPC Cartridge part # KXPDM4/5

OEM Stated Yield: 12,000

This cartridge uses an optical reset. The waste chamber must be spotless!! There is a float inside. That moves up as the waste toner increases. If you remove the small circuit board on the side you will see a small clear piece of plastic. This must be spotless and the float should be at the base. If this piece is dusty, or the float is up the printer will not reset.

Panasonic KXP-4420 Toner/4420 OPC Panasonic cartridge Part #'s KX-P451, KXPDM2

OEM Stated Yield: 18,000

Both of these cartridges use a simple 1116 amp fuse that must be soldered in. The OEM fuse looks like a black transistor. Most of the replacement fuses being sold are in a resistor type package. The physical looks of the fuse don't matter as long as it is 1116 Amp-fast blow. This is the same fuse as used in the 4450 OPC cartridge.

Panasonic KXP-4450 OPC Cartridge Panasonic OPC Cartridge part # KX-PDM1

OEM Stated Yield: 13,000

These cartridges use a simple 1/16 amp fuse that must be soldered in. The OEM fuse looks like a black transistor. Most of the replacement fuses being sold are in a resistor type package. The physical looks of the fuse don't matter as long as it is 1/16 Amp-fast blow. This is the same fuse as used in the 4420 cartridges.

Panasonic KXP-6100 OPC Cartrid2e Panasonic OPC Cartridge part # KX-PEP2

OEM Stated Yield: 15,000

The only known method is to reset the machine through the computer that is attached to the printer. When the change drum error message is displayed on your computer screen, press CTRL, + SHIFT, +F1 all at the same time. This will clear the drum count on the printer. Weare continuing to look into resetting the printer by itself.

Ricoh Aficio 200 OPC Cartrid2es Ricoh OPC Cartridge # 209622 (Type 250)

OEM Stated Yield: 45,000

The reset gear in the Ricoh Aficio 200 OPC cartridge has a different purpose than most reset mechanisms. Most resets set the cartridge page count back to zero, In the Aficio 200, it lets the machine know that a new cartridge has been installed. The machine then takes readings from its sensors to measure the charge of the developer and drum. From those readings it sets up the density for that drum unit. If the gear is not reset, the machine will continue to think the old cartridge is installed, and use the old settings. This usually causes either light prints, or backgrounding. It is also important to note that the replacement aftermarket developer was designed to work with the replacement drum as a matched system. In our tests, the OEM drum will not last another cycle.

Ricoh 4080/4150 oPC Cartrid2es Ricoh 4080 OPC Cartridge # 5397-36

OEM Stated Yield: 4080: 10,000,4150:12,000

Place a %" piece of "Scotch Tape" over the rectangular hole on the right front cover. The tape will momentarily press in a lever inside the machine and start to reset the counter. The tape will then break releasing the lever finishing the reset procedure. Make sure you use a thin tape and not a packing tape, as it is important that the tape break fairly easily.

Samsung SF-5100 Toner Cartrid2es Samsung Cart. # TDR-510P

OEM Stated Yield: 3,000

The Samsung SF-51 00 cartridges use a 5 x 20 mm, glass, fast acting, 63 mA, l25V fuse to reset the counter. The fuse is located on the front leading edge of the cartridge. Starter cartridges do not have a fuse, but will need one when the cartridge is rebuilt.

Sharp AL-IOOO/Xerox XD-IOO Toner Cartridges Sharp Cart. # AL-I00TD, Xerox Cart. # 6R914

OEM Stated Yield: 6,000

The standard AL-lOOTD, and 6R9l4 cartridges are not interchangeable. They have Oblong tabs on the backside of the cartridges that are in different locations. These tabs block the use of one brand in the others machine. They can be made to be interchangeable by cutting off the tabs, and sealing up the hole. See our cartridge recycling instructions for detailed information. These cartridges also do not have any type of reset. There is a sensor inside the cartridge that measures the mixture of toner to developer. As long as there is enough toner for a good mixture level, the toner lamp will stay off. There are no page counters or "Killer Chips" for these cartridges. There are other versions of these cartridges however that do have "Killer Chips". The following are the current Sharp AL-1000 Engine based cartridges that also have the chips in them.

Sharp AR-150 Toner Sharp Cartridge Part # AR-150TD

OEM Stated Yield: 6,000

These cartridges use the same supplies to recycle as the AL-l 000 (XD-l 00) cartridges. The difference is that the oblong tab on the back side if the cartridge i placed differently, and the cartridge has a "killer chip" that shuts the machine down after lO.OOO pages. These cartridges are designed to be recycled by Sharp authorized dealers. As such, replacement chips are available from authorized Sharp dealers, and now generic chips are also available. Since the chip shuts down the cartridge at 10,000 pages, you can recycle the cartridge 2-3 times with the same chip with out any problems. However, even if you just recycled the cartridge, once the page count reaches 10,000, you will need to replace the chip. To make matters even more confusing, it seems that non-network (Copier Only) machines do not need the chip installed at all! We think (but have not yet been able to confirm), that replacing the chip every cycle will prevent the machine from shutting down. That is an increase in cost, but that way you don't have to track the usage on your customer's machine, or for that matter, the type of machine they have. The chip is installed in the back of the connector on the cartridge.

Xerox WorkCentre Pro 16 Series Toner Xerox Part # 6R972

OEM Stated Yield: 6,000

Starter cartridges do not have a chip installed. The WorkCentre Pro 16 cartridges also use a chip, but in this case the chip does not seem to shut the machine down right away. This seems to work the same as the Sharp AR-150; it can be recycled 2-3 times before the chip shuts the cartridge down. Replacement chips for these cartridges are now available. These cartridges differ from the others in that the "Oblong Tab" on the back of the cartridge has it's own unique location. In addition to the tab, the Waste Chamber is also different. It has a different shape, and is held on by one screw at the top, and a plastic tab on the bottom. The chip is installed in the back of the connector on the cartridge.

Xerox WorkCentre Pro 215 Toner Xerox Part # 6R988/6R987

OEM Stated Yield: 6,000

These cartridges have a "Single Use Killer Chip". Unlike the other chips in this series, this chip shuts down the cartridge after the first cycle so it will be necessary to replace it each time. Replacement chips for these cartridges are now available. These cartridges also differ in that the "Oblong Tab" on the back of the cartridge has it's own unique location.

The chip is installed in the back of the connector on the cartridge.

Sharp AL-IOOO/Xerox XD-IOO OPC Cartridges Sharp Cart. # AL-IOODR, Xerox cart. # 13R551

OEM Stated Yield: 18,000

Both of the above cartridges are different, and not interchangeable but the reset procedures are the same. (These procedures are the same for the XC-800/Z-835 copier OPC cartridges). These cartridges are the most popular. There are also other cartridges that use the same supplies, but are physically different. There are tabs on the top of the cartridge that block installation into another brand copier. These tabs are different for each cartridge type. If the cartridge is not a "Starter cartridge", there are two white gears inside the green end cap. On the large white gear, remove the

clip ring and turn the gear back to the start position. (This is so the actuator (or flag) is next to the small gear). On some cartridges the "flag gear" is now black. It is located to the bottom right of the white gear. Make sure that when you snap the green end cap back on, the notch on the small gear lines up with the tab on the large single gear that is on the cartridge. Once everything lines up, snap the end cap in place. This is tricky, take your time! To reset the starter cartridge, or any cartridge through the menu, do the following: EXPOSURE

Enter the diagnostics menu by turning the machine on, and within 4 seconds, press "CLEAR", "EXPOSURE MODE", "CLEAR", "EXPOSURE MODE". (EXPOSURE MODE is the button on the far left). All of the display will go blank. Using the 10 and 1 buttons (copy quantity), enter "24" press "PRINT", enter "7" press "PRINT" again. The counter is now set to Zero!

Sharp AR-150 OPC Sharp Cartridge Part # AR-150DR

OEM Stated Yield: 18,000

To reset the cartridge through the menu, do the following: Enter the diagnostics menu by turning the machine on, and within 4 seconds, press "CLEAR", "EXPOSURE MODE", "CLEAR", "EXPOSURE MODE". (EXPOSURE MODE is the button on the far left). All of the display will go blank. Using the 10 and 1 buttons (copy quantity), enter "24" press "PRINT", enter "7" press "PRINT" again. The counter is now set to Zero!

Xerox WorkCentre Pro 16 Series OPC Xerox Part # 13R563

OEM Stated Yield: 18,000

The actual procedure for these machines is not currently known. It is highly probable that the same procedures used in the Sharp AL-lOOO/Xerox XD100 will work but this is still being investigated. Look for updates on these machines on our web site summit1aser.com

Xerox WorkCentre Pro 215 OPC Xerox Part # 13R563

OEM Stated Yield: 18,000

The actual procedure for these machines is not currently known. It is highly probable that the same procedures used in the Sharp AL-l OOO/Xerox XD100 will work but this is still being investigated. Look for updates on these machines on our web site summitlaser.com

Sharp AR-152 Toner Cartrid2es Sharp Cartridge Part # AR-152NT

OEM Stated Yield: 6,500

These cartridges have a "Single Use Killer Chip". This chip shuts down the cartridge after the first cycle so it will be necessary to replace it each time. Replacement chips for these cartridges are now available. The chip is installed in the back of the connector on the cartridge.

Sharp AR-152 Developer Sharp Cartridge Part # AR-152DV

OEM Stated Yield: 25,000

The developer is rated for 25,000 pages. The default setting on the machine is to keep running even after the 25K pages. That default setting can be set by the dealer to stop at 25K pages. It is considered a dealer option. To clear the developer after a stop, or to reset the counter, simulation 24-06 must be run.

To enter the simulation mode, press the "CLEAR KEY", EXPOSURE SELECT KEY", "CLEAR KEY", EXPOSURE SELECT KEY". Press 24 Press 06 Press "PRINT" The developer count is now cleared.

Sharp AR-152 OPC Sharp Cartridge Part # AR-152DR

OEM Stated Yield: 25,000

Inside the drum cover, there is a gear with a "Flag" on it. Remove the gear and place it so the flag is at the 12:00 position. This flag when the cartridge is installed, will turn down, and engage a switch in the machine. This tells the machine there is a new drum. If the drum unit has never been rebuilt, this flag gear is not there. It can be ordered from Sharp, but there is also a reset that can be done through the menu. To clear the drum count if the flag gear is not present, simulation 24-07 must be run. To enter the simulation mode, press the "CLEAR KEY", EXPOSURE SELECT KEY", "CLEAR KEY", EXPOSURE SELECT KEY". Press 24 Press 07 Press "PRINT" The drum count is now cleared.

Sharp AR-160 OPC Sharp Cartridge Part # AR-200DR

OEM Stated Yield:

Inside the drum cover, there are two white gears. The larger gear has a white tab that must be placed at the 12:00 Position. The smaller gear has two small tabs that must also be place at 12:00.

Sharp AR-163 TONER Sharp Cartridge Part # AR-201NT

OEM Stated Yield: 13,000

These cartridges have a "Single Use Killer Chip". This chip shuts down the cartridge after the first cycle so it will be necessary to replace it each time. Replacement chips for these cartridges are now available. The chip is installed in the back of the connector on the cartridge.

Sharp AR-163 Developer Sharp Cartridge Part # AR-201ND

OEM Stated Yield: 30,000

The developer is rated for 30,000 pages. The default setting on the machine is to keep running even after the 30K pages. That default setting can be set by the dealer to stop at 30K pages. It is considered a dealer option. To enter the simulation mode, press the "CLEAR KEY", "INTERRUPT KEY", "0" KEY", "INTERRUPT KEY", "MAIN CODE" "START KEY", "SUB CODE" "START KEY", "Main code" for clearing the developer = 42 "SUB CODE" for clearing the developer = 1. The developer count is now cleared. To exit the simulation mode press the "CLEAR ALL KEY". Turn the machine off and on.

Sharp AR-163 OPC Sharp Cartridge Part # AR-201DR

OEM Stated Yield: 30,000

Inside the drum cover, there is a gear with a "Flag" on it. Remove the gear and place it so the flag is at the 12:00 position. This flag when the cartridge is installed, will turn down, and engage a switch in the machine. This tells the machine there is a new drum. If the drum unit has never been rebuilt, this flag gear is not there. It can be ordered from Sharp, but there is also a reset that can be done through the menu. To enter the simulation mode, press the "CLEAR KEY", "INTERRUPT KEY", "0" KEY", "INTERRUPT KEY", "MAIN CODE" "START KEY", "SUB CODE" "START KEY", "Main code" for clearing the developer = 24, "SUB CODE" for clearing the developer = 7 The drum count is now cleared. To exit the simulation mode press the "CLEAR ALL KEY". Turn the machine off and on.

Sharp FO-26/28/29/ AL-80 Sharp Part # FO-26DR/28DR/29DR/AL-80DR

OEM Stated Yield: 20,000 (All)

These cartridges do not use any reset procedures at all. According to the Sharp manual, they should be replaced when the copy quality deteriorates. No codes will show on the display to change the cartridge. NOTE: None of these cartridges are interchangeable, they all are slightly different.

Sharp AL-800 Sharp Part # AL-80DR

OEM Stated Yield: 20,000

Open the front cover, and turn the power on. While pressing and holding both the "Exposure mode" and the "Clear key", close the front cover. Continue to hold these keys for 5 seconds, until the drum light goes out.

Xerox XE60/80 Xerox Cartridge Part # 13R553

OEM Stated Yield: 18,000

With the power on, open the front door. Hold the "Copy Contrast" button while closing the front door, continue holding the button down for 3 seconds, then release.

Sharp JX-9500 OPC/Toner Sharp Cartridge Part # JX':95DR

OEM Stated Yield: 50,000 OPC, 25,000 Toner

There is a glass fuse located under a clip on the top of the cartridge. Replace the fuse each cycle. The fuse is a 250V, 80mA, 5x20mm fast acting glass type. The toner waste bottle also uses a fuse- a 250V, 50Ma 5x20mm fast acting glass type.

Sharp JX-9600 Toner Cartridge Sharp Cartridge Part # JX-96ND

OEM Stated Yield: 15,000

This cartridge needs to have the fuse replaced each cycle. The replacement fuses are physically different from the OEM but work the same. The fuses for this cartridge are a special, very fast acting, type and must be ordered from your supplier. The replacement fuse must be inserted across the two screws as shown. We have found it best to use solid telephone wire and wire wrap around the fuse posts. Soldering wires to the fuse can cause the fuse to blow if too much heat is used.

Sharp JX-9600 OPC Cartridge

With the exception of starter cartridges, these cartridges have a small board located on the end of the cartridge. The small surface mount micro fuse (125mA) must be replaced each cycle. If you have a starter cartridge the machine must be reset through the menu. (Starter cartridges do not have a fuse board.) Almost all of the machines have a different, and complicated reset procedure. Two of the most popular machines are listed below. Other machines probably also have a similar type of reset procedure, but we have not been able to confirm them.

Sharp JX-9600 Sharp OPC Cartridge Part # JX96DR

OEM Stated Yield: 30,000

Turn the printer off. With the MENU and ENTER keys depressed, turn the power on. The display will read PCU DIAG MODE G. Press the MENU key repeatedly until you see COUNTER SET. Press the ENTER key once, and the MENU key twice. The display will read DRM 05000. Press and hold the DOWN ARROW key until the number resets to 00000. Press the MENU key four times, the Display will read: DTRM XXXXX Press and hold the DOWN ARROW key until the left three digits reset to zero (DTRM OOOXX) Press the ENTER key, the display should read COUNTER SET. Insert a piece of paper into the manual feed slot on the front of the printer, and press the FORM FEED key. You will hear a beep. Turn the printer off, and back on. The drum counters are reset!

Texas Instruments MicroLaser Pro Series MicroLaser Pro 600/ProE/Power Pro/Pro-8/Pro-12 Texas Instruments OPC Cartridge Part # 4793576-0001

OEM Stated Yield: 30,000

1. Turn power off to the printer, then turn power back on while holding the up and select keys pressed. <PCU DIAG MODE C> will be displayed.

2. Press select until <NV RAM INITIAL> is displayed. Place a sheet of paper in manual feed slot and press form feed. Printer should beep.

3. Press the select key until <TEST PRINT> is displayed.

4. Press the up key once.

5. Press the previous key until <JAM OFF> is displayed.

6. Press the select key once.

7. Press the previous key until <HEATER OFF> is displayed.

8. Press the select key once.

9. Press the previous key until <MUL TI OFF> is displayed.

10. Press the select key once.

11. Press the previous key until <TONER OFF> is displayed.

12. Press the up key once. <TEST PRINT> will be displayed.

13. Press the FORM FEED key. This will give the levels for the printer, heater, and toner. Write down or remember the toner level reading. (Note that these readings will be displayed in LCD display window, not on the test print. The display will automatically go back to displaying <TEST PRINT>

14. Press the select key twice to display <COUNTER SET>

15. Press the up key twice to display <DEV XXXXX>.

16. Press the select key until <TNL xxx> is displayed. Press the next arrow key to enter the same number that was displayed in step 12.

17. Press the up key. <COUNTER SET> will be displayed.

18. Insert a sheet of paper into the manual feed slot. Press the FORM FEED key. The printer will beep.

Sharp SN-1420/1430 OPC Sharp Cartridge # SN-142DR

OEM Stated Yield: 25,000

To reset the counter in the SN-142011430 OPC cartridges the connector on the rear of the cartridge must be replaced. New replacement chips are available with the housing. Unscrew the old connector and replace with the new. These drums are rated for 30,000 pages.

Sharp Z-20 OPC/Xerox 5305 Series Sharp Cartridge # ZT - 20DR/Xerox # 113RI04/105

OEM Stated Yield: 20,000

Turn the power off. Hold down the exposure button, and turn the power on. All the lights except the ready light will come on. Release the exposure button. Press the exposure button again and hold for 10 seconds, until the three exposure lights come on. Release the exposure button. Once the ready light comes on the counter is reset. Turn the power off then back on to lock in the new settings.

Sharp Z30 OPC/Xerox 5220/XC520 Series Xerox # 20E18410, Sharp # ZT30DR

OEM Stated Yield: 20,000

NOTE: This procedure should be used by qualified technicians only! Placing the jumper wire in the wrong spot can damage the copier! This procedure should never be done with out rebuilding the drum unit/waste chamber first. Turn the power off. Remove the front cover; the main board is now visible. Place a jumper wire across pins 2 & 3. (Located under the variable resistors). Turn the copier on for 5 seconds then off. Remove the jumper and close up the copier. The counter is reset.

Sharp Z50/Z70 OPC Sharp # ZT50DR, Xerox 5008 (13R50), 5009 (13R55)

OEM Stated Yield: 10,000

Inside the copier on the back wall behind where the drum cartridge fits is a small black box. This box contains a mechanical counter with a lever that sticks out the top. Press the lever back and the counter is reset. (The lever doesn't move much). This can and should be done with the power off. The old style OPC cartridge came with a metal bar that you can set so that it protrudes from the cartridge. The bar would hit the lever and reset the counter. Newer cartridges have a small piece of black plastic that will hit the lever and be crushed in. These cartridges cannot be reset. You must manually reset the counter inside the copier.

Sharp Z-835/ Xerox XC-800 OPC Cartridges Sharp OPC Part # ZT81DR, Xerox OPC Part # 13R544

OEM Stated Yield: 20,000

Both of the above cartridges are different, and not interchangeable but the reset procedures are the same. (These procedures are the same for the XD-100/AL-1O00 copier OPC cartridges). If the cartridge is not a "Starter cartridge", there is a small gear with a flag on it located on the gear side of the cartridge bottom right. Remove the gear and replace so that the flag is at the 1 0' clock position. If this gear is missing, the cartridge is a starter cartridge, and the following procedure must be used. To reset the starter cartridge, or any cartridge through the menu, do the following: Enter the diagnostics menu by turning the machine on, and within 4 seconds, press "CLEAR", "EXPOSURE MODE", "CLEAR", "EXPOSURE MODE". (EXPOSURE MODE is the button on the far left). All of the display will go blank. Using the 10 and 1 buttons (copy quantity), enter "24" press "PRINT", enter "7" press "PRINT"

again. The counter is now set to Zero!

TEC LB-1305 OPC

OEM Stated Yield: 10,000 (All)

There are three major versions of these cartridges. Two use an external counter and one doesn't use one at all. The older style 1305 has no counter. The label on top of the cartridge has a place to write down the starting page count. You are supposed to keep track of the pages printed. The next version had a Black plastic counter. This counter has to be replaced every cycle. New counters are available as well as a reset service. The last version (actually the TECLB132111323) uses a Green plastic counter. This must also be replaced every cycle. No reset services are available for the green counters. The following chart lists by Manufacturer and OPC Cartridge the correct counter. Counter chart on page 118.

Tektronix Phaser 780 OPC 016-1864-00

OEM Stated Yield: 50,000 Black, 12,500 Color

These cartridges have a "Single Use ARD Chip". This chip shuts down the cartridge after the first cycle so it will be necessary to replace it each time. Replacement chips for these cartridges are available.

Toshiba A-739 oPC LS12TL200

OEM Stated Yield: 25,000

There is a small circuit board inside the OPC cartridge. The old fuse must be unsoldered and a new one installed each cycle. The fuse is a 125V, 2AG, 1/8A glass type with axial leads for soldering.

Sharp Z-835/ Xerox XC-800 OPC Cartridges Sharp OPC Part # ZT81DR, Xerox OPC Part # 13R544

OEM Stated Yield: 20,000

Both of the above cartridges are different, and not interchangeable but the reset procedures are the same. (These procedures are the same for the XD1 OO/AL-l 000 copier OPC cartridges). If the cartridge is not a "Starter cartridge", there is a small gear with a flag on it located on the gear side of the cartridge bottom right. Remove the gear and replace so that the flag is at the 1 0' clock position. If this gear is missing, the cartridge is a starter cartridge, and the following procedure must be used. To reset the starter cartridge, or any cartridge through the menu, do the following: Enter the diagnostics menu by turning the machine on, and within 4 seconds, press "CLEAR", "EXPOSURE MODE", "CLEAR", "EXPOSURE MODE". (EXPOSURE MODE is the button on the far left). All of the display will go blank. Using the 10 and 1 buttons (copy quantity), enter "24" press "PRINT", enter "7" press "PRINT" again. The counter is now set to Zero!

TEC LB-1305 OPC

OEM Stated Yield: 10,000 (All)

There are three major versions of these cartridges. Two use an external counter and one doesn't use one at all. The older style 1305 has no counter. The label on top of the cartridge has a place to write down the starting page count. You are supposed to keep track of the pages printed. The next version had a Black plastic counter. This counter has to be replaced every cycle. New counters are available as well as a reset service. The last version (actually the TECLB132lI1323) uses a Green plastic counter. This must also be replaced every cycle. No reset services are available for the green counters. The following chart lists by Manufacturer and OPC Cartridge the correct counter.

Tektronix Phaser 780 OPC 016-1864-00

OEM Stated Yield: 50,000 Black, 12,500 Color

These cartridges have a "Single Use ARD Chip". This chip shuts down the cartridge after the first cycle so it will be necessary to replace it each time. Replacement chips for these cartridges are available.

Toshiba A-739 OPC LS12TL200

OEM Stated Yield: 25,000

There is a small circuit board inside the OPC cartridge. The old fuse must be unsoldered and a new one installed each cycle. The fuse is a l25V, 2AG, 1/8A glass type with axial leads for soldering.

Xerox DC 212/214 Xerox Cartridge: part # 113R180/113R181

OEM Stated Yield: 14,000

To reset the counter in the DC 212/214 OPC cartridges the connector on the rear of the cartridge must be replaced. This will clear the 17 or J8 codes. 17= change copy cartridge, J8 = wrong or bad connector. There are many different cartridges that use different connectors for these machines. A list of some of them is as follows: 113RI80/181 (US), 113R287 (Retail Stores), 113R2861113R182 (XL), XL = Xerox Limited /Europe

If you are outside the US, and are not sure what type of connector to use, it is possible to find out by going into the machines diagnostics. To do this turn the machine off, press the "0" while turning the power on, press the Stop/Clear button. The lights will go off and "---" will show on the display. Wait 30 seconds for the optics self test to complete. Enter "202" and press print. If the display had a J8 code before starting, it will show two three-digit numbers in sequence. The first three-digit number shows the type of replacement cartridge that the machine is expecting. 001 =113RI801181, 005 = 113R287. If the cartridges your machine needs is not available, you can change what type of cartridge the machine will accept by doing the following. Enter the diagnostics mode as in above. Enter "406" and press Print. Turn off the power and install the correct cartridge. The machine will now look for that type of cartridge from now on. Only do this if you are sure that you will be supplying the cartridges for this machine. If the customer goes out and purchases the "correct" cartridge that was made for his machine, it will no longer work until the above procedure is run again.

Xerox DC 220 Xerox Cartrid2e part # 113R120/113R178/113R276

OEM Stated Yield: 20,000

To reset the counter in the DC 220/230/240 OPC cartridges the connector on the rear of the cartridge must be replaced. This will clear the 11 or 17 codes. 11 = Toner Out, 17 = Change cartridge

There are many different cartridges that use different connectors/chips for these machines. A list of them is as follows:

DC220/230/420 Type A: 113R120, 113R178, 113R276DC220/230/420 Type B: 113RI79, 113R275

DC220/230/420 Type C: 113R313 DC332/340 Type A: 113R315, l13R317 DC332/340 Type B: l13R316

Each cartridge type is for a different machine. When ordering the replacement chip, make sure you know the correct cartridge part number that your customer's machine calls for. The chips are not interchangeable. Other cartridges error codes are:

J 6: Incorrect cartridge type

13: cartridge not seated properly, or not present

Xerox N-24/32/40

OEM Stated Yield: 20-23,000 (Depending on cartridge)

This engine has more non-interchangeable cartridges than any engine I have ever seen. All of them use a "ARD" that is built into the connector. Almost every type of cartridge has it's own individual ARD. Since every individual cartridge has it's own chip, it is imperative that you have the OEM cartridge part number when ordering the chips! The reset boards are now available with the plastic housing so that soldering the chip in is no longer necessary. There are also services where you can have the old chip reset. There are still cartridges that do not have replacement chips available yet. These are mainly international, but not all. A chart list of the available versions is on page 119

Xerox P8E (Samsung FS-5000 Engine)

OEM Stated Yield: 5,000 (Except for Lexmark 13TOI0l: 6,000)

There are 3 main versions of this cartridge so far. The Xerox Docuprint P8e l13R296/l 00R364, WorkCentre 385 l13R 296, and the Lexmark Optra E3l 0/312 NOTE: Lexmark has replaced the l2A2202 (5k) cartridge with the l3TOlOl (6k) cartridge. The new cartridge works in both machines. When recycling these cartridges the fuse must be replaced in the Xerox cartridges. The Lexmark cartridges have a plastic dummy fuse in it. There has been some conflicting information on if the fuse should be replaced or not, the following should help to clear it up. If the machine says toner low and the cartridge is changed. A new fuse is not needed. However if the machine says change cartridge, that fuse is needed. Since you really have now way to know the state of your customer's machine, we recommend that the fuse be replaced each cycle. These fuses are very inexpensive, and this way you have no worries! There have recently been reports of starter cartridges with the plastic dummy fuses. Those fuses must be replaced with a real fuse. These fuse is a 125V, 100mA, 5x20mm fast acting glass type.

Xerox XC-23/33 OPC 13R546

OEM Stated Yield: 30,000

To reset the counter in the XC-23 OPC cartridges the connector on the rear of the cartridge must be replaced. This will clear the 17 or 18 codes. 17= change copy cartridge, 18 = wrong or bad connector. New replacement connectors are not currently available, but there are companies that can repair the OEM connector for you

Xerox XDL-23/33 OPC 13R5556

OEM Stated Yield: 50,000.

To reset the counter in the XC-23 OPC cartridges the connector on the rear of the cartridge must be replaced. This will clear the 17 or 18 codes. 17= change copy cartridge, 18 = wrong or bad connector. New replacement connectors are not currently available, but there are companies that can repair the OEM connector for you.

Xerox 1012 OPC 13R8, 113R92

OEM Stated Yield: 18,000

The 1012 opc cartridges look very similar to the 5011 and 5012, but they are different and NOT interchangeable. There are now many different Xerox part numbers for these cartridges. They are interchangeable, just sold from different sources. A list of some of them is as follows: 13R8 (US), 13RIO, 13R30, 113R92 (Retail Stores), and 13R500. This cartridge uses an optical reset similar to the Panasonic 4410. The waste chamber must be spotless, and the float in the down position. There is a clear plastic bubble on top of the cartridge. This is what the sensor looks at and it must be spotless! The 17 code is triggered when the waste chamber fills up and moves the float into the bubble, interrupting the optical sensor.

Xerox 5011 OPC Xerox cartridge Part # 13R44

OEM Stated Yield: 18,000

The 5011 ope cartridges look very similar to the1012 and 5012, but they are different and NOT interchangeable.

These cartridges use a reset fuse board located inside the connector. The connector must be un-soldered and a new one soldered in. Be very careful not to melt the cable when soldering. Make sure that you use the correct connector. The 5012 will not work in the 5011 and vice-versa. To tell if you have the correct connector, read the resistance between pin's 3 & 6.5011 connectors read 15,000 ohms while 5012 connectors read 1,500 ohm

Xerox 5012/5014 OPC 13R19

OEM Stated Yield: 18,000

The 5012 opc cartridges look very similar to the 1012 and 5011, but they are different and NOT interchangeable. There are now many different Xerox part numbers for these cartridges. They are interchangeable, just sold from different sources. They are l3R19 (US), 13R22, 13R24, l13R91 (retail), and 13R508. These cartridges use a reset fuse board located inside the connector. The connector must be un-soldered and a new one soldered in. Be very careful not to melt the cable when soldering. Make sure that you use the correct connector. The 5011 will not work in the 5012 and vice-versa. To tell if you have the correct connector, read the resistance between pin's 3 & 6.5012 connectors read 1,500 ohms, while 5011 connectors read 15,000 ohms.

Xerox 5018 OPC Xerox Cartridge Part # 13R9

OEM Stated Yield: 18-22,000 (Depends on Machine)

There are a variety of cartridges now available for these machines. They all use the same supplies. 13R9, l3R74(US), l13R16l (Retail) 1 13R93 (Missing Internal Counter), l3R13(RX), l3R18(XLA), l3R505 (XCL). The 5334 cartridges appear similar but are different. They still use the same supplies to recycle, but they do not have a reset counter installed inside. They also have an extra tab on the back side of the cartridge that stops the cartridge from being installed completely in a 5018 machine. The cartridges used in these machines are the 13R67 (US), 13R68 (RX/XL), 13R69 (XLA), l3R520 (XCL). These machines are basically set up to "run for life" in other words, the drum cartridge is run until there is a problem. At that point another cartridge is installed, and the machine continues to print. There is no reset involved. A code (J2) may show on the 5624, and 5824 machines, to clear it do the following: Enter the diagnostics by holding the"O" while turning on the machine. Enter "9", PRINT, "50", PRINT. This will start the machine up and clear the J2 code. Information on these machines is still a little vague as we are still in the learning process. The 5018 OPC cartridge must be disassembled so that you have access to the mechanical counter. New OEM replacement belts are now available making any Xerox machine warranty issues hard to enforce. Turn the cartridge so that the Counter is in front of you. On the left side of the counter, there are two white levers. While pressing both of the levers down, turn the large black gear backwards,(Clockwise). Stop when the green or knurled section of the gear is visible through the small hole in the cover. (You must loosely place the cover over the Waste Chamber; the hole is located under the 12 label. Once this gear is in position, release both of the levers. At this point you should not be able to turn the large black gear. If you can, press down both levers and turn the gear one or two more "clicks" until the gear is locked. The two White Levers should stay flat.

Xerox 5113 Series (5113 5114 5614) Xerox Cartridge Part # 113R79

OEM Stated Yield: 18,000

To reset the counter in the 5113 0 PC cartridges the connector on the rear of the cartridge must be replaced. This will clear the 17 or J8 codes. 17= change copy cartridge, J8 = wrong or bad connector.

There are many different cartridges that use different connectors for these machines. A list of some of them is as follows: 113R79/113R80/113R85 (US), 113R86 (US connector works), for the 113R81/113R82 cartridges no connectors are available.

If you are outside the US, and are not sure what type of connector to use, it is possible to find out by going into the machines diagnostics. To do this turn the machine off, press the "0" while turning the power on. Enter "3" and press print, enter "3" again and press print. The display will show the installed cartridge type. 4=US, and Europe 5113/5114 7 = Europe 5614.

NOTE: Although the Sharp 2014/2114 cartridges appear similar, they are not. The Sharp cartridges do not have a counter (they are reset through the menu), and the gears are different.

Xerox 5312/5313/5314 Xerox OPC Cartridge Part # 13R60, 13R62

OEM Stated Yield: 18,000

To reset the counter in the 5312/14 OPC cartridges the connector on the rear of the cartridge must be replaced. This will clear the]7 or J8 codes. 17= change copy cartridge, J8 = wrong or bad connector.

There are many different cartridges that use different connectors for these machines. A list of some of them is as follows: 13R62/62 (US), 13R61 US (5313 Only!), 13R65/13R66 (RX), 13R517 (XCL), 13R63 (XLA), 13R518 (XCL). It should be noted that the 5313 uses a different connector than the 5312/14 cartridges and that they are NOT interchangeable. If you are outside the US, and are not sure what type of connector to use, it is possible to find out by going into the machines diagnostics. To do this turn the machine off, press the "0" while turning the power on. Enter "31" and press print. The display will show OO,OO,Xx. The XX being the installed cartridge type. 17=US, 51 = 5313,85 = Rank Xerox.

Xerox 5316/5317 OPC Xerox Cartridge Part # 13R54

These cartridges have two small fuses that must be replaced each cycle. The old fuses must be unsoldered from the circuit board on the connector, and the new soldered in. Be very careful not to damage the board with too much heat.

Xerox 5318/5340 Xerox Cartridge Part # 13R75/13R56

OEM Stated Yield: 25,000

To reset the counter in the 5318 OPC cartridges the connector on the rear of the cartridge must be replaced. This will clear the]7 or J8 codes.]7= change copy cartridge, J8 = wrong or bad connector. There are different connectors used in the 5318 and 5340 cartridges. Most of the 5318 connectors have small fuses inside, while the 5340 uses an EEProm.

There are many different cartridges that use different connectors for these machines. A list of some of them is as follows: 13R75/56 (US), 13R516 (XCL), 13R57 (RX),

If you are not sure what type of connector to use, it is possible to find out by going into the machines diagnostics. To do this turn the machine off, press the "0" while turning the power on. Enter "30" and press print, then enter 93 and press print again. The display will show the installed cartridge type. 1 =US, 5 = Europe, 6 = Canada/Latin America.

Xerox Country Codes:

Xerox lists two to three digit codes for most of their cartridges. Most of the time the cartridges are identical, but the reset chips are programmed differently. The following list is not all the country codes, just the ones we have been able to confirm. US=USA, WH = Western Hemisphere, XCL = Xerox Limited (Canada), XL = England, RX = Rank Xerox. As we are able to confirm other country codes we will list them on our web site.